

In the Claims

The status of claims in the case is as follows:

1 1. [Currently amended] Method for evaluating a network,
2 comprising ~~the steps of:~~

3 executing a ~~burst test~~ a plurality of burst tests to
4 determine ~~the network's~~ a network's streaming current
5 streaming speed, each said burst test including

6 transmitting a burst including a plurality of
7 packets over said network to a receiver; and

8 determining ~~the time~~ a time of receipt by said
9 receiver of each said ~~packets~~ packet in said burst
10 ~~by said receiver;~~

11 determining a total receipt time by said receiver
12 of all packets in said burst; and

13 discarding any burst in which all packets in said
14 burst have not been received back and in the order
15 said packets were transmitted; and

16 ~~responsive to said time of receipt of each said~~
17 ~~packets,~~ calculating the ~~current speed~~ an average
18 receipt time of all bursts not discarded; and

19 responsive to said average receipt time calculating a
20 current speed of said network.

1 2. [Currently amended] The method of claim 1, further
2 comprising ~~the step of~~:

3 evaluating ~~as the maximum speed~~ a maximum speed of said
4 network ~~the best observed~~ as a function of a best
5 observed time of receipt for ~~the plurality of packets~~
6 said bursts not discarded.

1 3. [Currently amended] The method of claim 2, further
2 comprising ~~the step of~~ a step of:

3 responsive to detecting several instances of said time
4 of receipt representing current speeds close to said
5 maximum speed, determining that testing has stabilized.

1 4. [Currently amended] The method of claim 1, ~~said~~
2 ~~transmitting step~~ further comprising: ~~the transmission of~~

3 constructing a logical best ~~bursts~~ burst from packets
4 in said bursts not discarded; and

5 evaluating streaming speed of said network as a
6 function of a total number of bits in said logical best
7 burst and total receipt time of said logical best
8 burst.

1 5. [Currently amended] The method of claim 4, ~~1, said~~
2 ~~transmitting step comprising the transmission of packets of~~
3 ~~a size equal to network maximum packet size (MTU) each said~~
4 burst including at least i packets, and said constructing
5 comprising:

6 selecting a best time of receipt of each nth (n=1...i)
7 packet of said bursts not discarded; and

8 constructing as said logical best burst a burst
9 comprising i packets of packets n=1...i selected as
10 having best times of receipt.

1 6. [Canceled]

1 7. [Currently amended] The method of claim 2, further

2 comprising ~~the step of~~ a step of:

3 calculating an average streaming utilization percent by
4 taking ~~the ratio~~ a ratio of ~~average burst rate to best~~
5 ~~burst rate~~ the current speed of said network to the
6 streaming speed of said network.

1 8. [Currently amended] The method of claim 7, further
2 comprising ~~the step of~~ a step of:

3 adjusting average streaming utilization for occurrences
4 of burst frame discards.

1 9. [Original] The method of claim 1, said transmitting
2 step including ~~the transmission~~ a transmission of complex
3 bursts in which short and long frames are transmitted per
4 test iteration.

1 10. [Currently amended] The method of claim 9, further
2 comprising ~~the step of~~ a step of determining the streaming
3 speed of said network by dividing ~~the difference~~ a
4 difference in size of said short frames and said long frames
5 by ~~the difference~~ a difference in transmission time between
6 short frames and long frames.

1 11. [Currently amended] Method for establishing network
2 characteristics including ~~the historical~~ an historical,
3 current, and predicted future of states of a network for all
4 types of network traffic, including interactive, browser,
5 batch, and realtime traffic, comprising the steps of:

6 transmitting probative packets into said network, said
7 packets including echoed and non-echoed packets, of
8 like and differing lengths, of like and differing
9 network priority, individually and in bursts;

10 measuring [[the]] transit times of said probative
11 packets; and

12 responsive to said transit times, determining ~~the~~
13 ~~streaming speed~~ a streaming speed of said network.

1 12. [Currently amended] System for evaluating the
2 characteristics of a network, comprising:

3 a send node for communicating probative packets into
4 said network, said packets including burst packets;

5 a receive node for determining that frames of said
6 packets are received in sequence and without
7 retransmission, and ~~the elapsed~~ an elapsed time between
8 first through last frames of said packets;

9 a speed analysis application node responsive to said
10 elapsed time and ~~the size of~~ a size of said packets for
11 calculating network speed.

1 13. [Currently amended] A program storage device readable
2 by a machine, tangibly embodying a program of instructions
3 executable by a machine to perform method steps for
4 evaluating [[the]] characteristics of a network, said method
5 steps comprising:

6 communicating probative packets into said network, said
7 packets including burst packets;

8 determining at ~~the receiver~~ a receiver of said packets
9 that frames of said packets are received in sequence
10 and without retransmission, and ~~the elapsed~~ an elapsed
11 time between first through last frames of said packets;

12 responsive to said elapsed time and ~~the size of~~ a size

13 of said packets [[for]] calculating network speed.

1 14. [Currently amended] An article of manufacture
2 comprising:

3 a computer useable medium having computer readable program
4 code means embodied therein for evaluating a network, the
5 computer readable program means in said article of
6 manufacture comprising:

7 computer readable program code means for causing a
8 computer to effect executing a burst test to determine
9 ~~the network's~~ a network's streaming speed, said burst
10 test including

11 transmitting a plurality of packets over said
12 network to a receiver; and

13 determining ~~the time~~ a time of receipt of each
14 said packets by said receiver; and

15 computer readable program code means for causing a
16 computer to effect responsive to said time of receipt
17 of each said packets, calculating ~~the current speed a~~

18 current speed of said network.

1 15. [Currently amended] A ~~computer program product or~~
2 ~~computer program element for executing the steps of~~ program
3 storage device readable by a machine, tangibly embodying a
4 program of instructions executable by a machine for
5 evaluating characteristics of a network, said method
6 comprising:

7 transmitting probative packets into ~~said network~~ a
8 network, said packets including echoed and non-echoed
9 packets, of like and differing lengths, of like and
10 differing network priority, individually and in bursts;

11 measuring the transit times of said probative packets;
12 and

13 responsive to said transit times, determining ~~the~~
14 ~~streaming speed~~ a streaming speed of said network.

1 16. [New] A program storage device readable by a machine,
2 tangibly embodying a program of instructions executable by a
3 machine to perform operations for evaluating characteristics

4 of a network, said operations comprising:

5 executing a a plurality of burst tests to determine a
6 network's current speed, each said burst test including

7 transmitting a burst including a plurality of
8 packets over said network to a receiver; and

9 determining a time of receipt by said receiver of
10 each said packet in said burst;

11 determining a total receipt time by said receiver
12 of all packets in said burst; and

13 discarding any burst in which all packets in said
14 burst have not been received back and in the order
15 said packets were transmitted; and

16 calculating an average receipt time of all bursts not
17 discarded; and

18 responsive to said average receipt time calculating a
19 current speed of said network.

1 17. [New] The program storage device of claim 16, said
2 operations further comprising:

3 evaluating a maximum speed of said network as a
4 function of a best observed time of receipt for said
5 bursts not discarded.

1 18. [New] The program storage device of claim 17, said
2 operations further comprising:

3 responsive to detecting several instances of said time
4 of receipt representing current speeds close to said
5 maximum speed, determining that testing has stabilized.

1 19. [New] The program storage device of claim 16, said
2 operations further comprising:

3 constructing a logical best burst from packets in said
4 bursts not discarded; and

5 evaluating streaming speed of said network as a
6 function of a total number of bits in said logical best
7 burst and total receipt time of said logical best
8 burst.

1 20. [New] The program storage device of claim 19, each
2 said burst including at least i packets, and said operations
3 further comprising:

4 selecting a best time of receipt of each n th ($n=1\dots i$)
5 packet of said bursts not discarded; and

6 constructing as said logical best burst a burst
7 comprising i packets of packets $n=1\dots i$ selected as
8 having best times of receipt.

1 21. [New] The program storage device of claim 16, said
2 operations further comprising:

3 calculating an average streaming utilization percent by
4 taking a ratio of network streaming speed to average
5 network streaming speed.

1 22. [New] The program storage device of claim 21, said
2 operations further comprising:

3 adjusting average streaming utilization for occurrences
4 of burst frame discards.

1 23. [New] The program storage device of claim 16, said
2 said transmitting operation including a transmission of
3 complex bursts in which short and long frames are
4 transmitted per test iteration.

1 24. [New] The program storage device of claim 23, said
2 operations further comprising:

3 determining streaming speed of said network by dividing
4 a difference in size of said short frames and said long
5 frames by a difference in transmission time between
6 short frames and long frames.

1 25. [New] Method for evaluating a network, comprising:

2 executing a a plurality of burst tests to determine a
3 network's current speed, each said burst test including

4 transmitting a burst including a plurality of
5 packets over said network to a receiver; and

6 determining a time of receipt by said receiver of
7 each said packet in said burst;

8 determining a total receipt time by said receiver
9 of all packets in said burst; and

10 discarding any burst in which all packets in said
11 burst have not been received back and in the order
12 said packets were transmitted;

13 calculating an average receipt time of all bursts not
14 discarded;

15 responsive to said average receipt time calculating a
16 current speed of said network;

17 evaluating a maximum speed of said network as a
18 function of a best observed time of receipt for said
19 bursts not discarded; and

20 responsive to detecting several instances of said time
21 of receipt representing current speeds close to said
22 maximum speed, determining that testing has stabilized.